

### **REMARKS**

Favorable reconsideration of this application is respectfully requested in view of the foregoing amendments and the following remarks.

Claims 1-10 are pending in the instant application, of which claims 1, 3, 5, 6, 8 and 10 are independent. Claims 1-3, 5-8 and 10 have been amended hereby. Claims 11-20 have been cancelled, without prejudice or disclaimer. No new matter has been entered.

### **Claim Objection**

Claims 1-3, 5-7 and 10 are objected. By the foregoing amendments, these claims have been amended to address the objection to the claims. Accordingly, withdrawal of the objection to the claims is respectfully requested.

### **Claim Rejection Under 35 U.S.C. §103**

Claims 1, 3, 5-6, 8 and 10 are rejected under 35 U.S.C. §103(a) as being unpatentable over GOPALAN et al. (US 2003/0176934 A1) hereinafter referenced as GOPALAN in view of WU et al. ("Fragile speech watermarking based on exponential scale quantization for temper detection", Acoustics, Speech, and Signal Processing, 2002, Proceeding IEEE international conference) hereinafter referenced as WU. Claims 2, 4, 7 and 9 are rejected under 35 U.S.C. §103(a) as being unpatentable over GOPALAN in view of WU, and further in view of CHIU et al. (US 2004/0220803 A1) .

### **INDEPENDENT CLAIMS 1 and 5**

As an example, independent claim 1 recites (among other things) features of "an embedding judgment unit, for every speech code, to judge whether or not a speech code is capable of embedding data based on a liner spectrum pair (LSP) code, a pitch lag code, a fixed code and a gain code included in a past speech code output from a code excited linear prediction (CELP) encoder" and "an embedding unit to embed data to be embedded in a part of a LSP code, a pitch lag code and a fixed code among a speech code for which it is judged that a speech code is capable of embedding data". As will be explained below, at least these features of claim 1 is a distinction over each of GOPALAN and WU, and thus over their combination.

Regarding GOPALAN, GOPALAN does not disclose a CELP encoder to output a speech code including a liner spectrum pair (LSP) code, a pitch lag code, a fixed code and a gain code, as stated in the Office Action (see Office Action at page 5). Hence, GOPALAN fails to teach or suggest "the embedding judgment unit to judge whether or not a speech code is capable of embedding data based on a LSP code, a pitch lag code, a fixed code and a gain code included in a past speech code output from a CELP encoder". GOPALAN also fails to teach or suggest "the embedding unit to embed data to be embedded in a part of a LSP code, a pitch lag code and a fixed code among a speech code for which it is judged that a speech code is capable of embedding data". Hence, the noted features of claim 1, namely the embedding judgment unit and the embedding unit having the above mentioned limitations, are a distinction over GOPALAN.

Regarding WU, WU fails to teach or suggest that “the embedding judgment unit to judge whether or not a speech code is capable of embedding data based on a LSP code, a pitch lag code, a fixed code and a gain code included in a past speech code output from a CELP encoder”. WU also fails to teach or suggest “the embedding unit to embed data to be embedded in a part of a LSP code, a pitch lag code and a fixed code among a speech code for which it is judged that a speech code is capable of embedding data”. Especially, WU describes that “we observe that only the LSP coefficients and the lag of pitch predictors are stable enough among all coefficients of G. 723.1” (see WU at page IV-3306, right column). Such description of WU teaches away from the feature of the embedding unit to embed data into not only a part of a LSP code and a pitch lag code not also a fixed code. Hence, the noted features of claim 1, namely the embedding judgment unit and the embedding unit having the above mentioned limitations, are a distinction over WU.

Among other things, a *prima facie* case of obviousness must establish that the asserted combination of references teaches or suggests each and every element of the claimed invention. In view of the distinction of claim 1 noted above, at least one claimed element is not present in the asserted combination of references. Claim 5 has the same features of claim 1. Hence, the Office Action fails to establish a *prima facie* case of obviousness vis-à-vis claims 1 and 5. Claim 2 ultimately depend from claim 1, respectively, and so at least similarly distinguish over the asserted combination of references.

### **INDEPENDENT CLAIMS 3 and 5**

As an example, independent claim 3 recites (among other things) features of "an extraction judgment unit to judge whether or not data is being embedded in a speech code based on a liner spectrum pair (LSP) code, a pitch lag code, a fixed code and a gain code included in a past speech code output from a code excited linear prediction (CELP) encoder " and "an extraction unit to extract data being embedded in a part of a LSP code, a pitch lag code and a fixed code among a speech code for which it is judged that data is being embedded". As will be explained below, at least these features of claim 1 is a distinction over each of GOPALAN and WU, and thus over their combination.

Regarding GOPALAN, GOPALAN does not disclose a CELP encoder to output a speech code including a liner spectrum pair (LSP) code, a pitch lag code, a fixed code and a gain code, as stated in the Office Action (see Office Action at page 5). Hence, GOPALAN fails to teach or suggest "the extraction judgment unit to judge whether or not data is being embedded in a speech code based on a LSP code, a pitch lag code, a fixed code and a gain code included in a past speech code output from a CELP encoder". GOPALAN also fails to teach or suggest "an extraction unit to extract data being embedded in a part of a LSP code, a pitch lag code and a fixed code among a speech code for which it is judged that data is being embedded". Hence, the noted features of claim 3, namely the extraction judgment unit and the extraction unit having the above mentioned limitations, are a distinction over GOPALAN.

Regarding WU, WU fails to teach or suggest that "the extraction judgment unit to judge whether or not data is being embedded in a speech code based on a LSP code, a pitch lag code, a fixed code and a gain code included in a past speech code output from a CELP encoder". WU also fails to teach or suggest "the extraction unit to extract data being embedded in a part of a LSP code, a pitch lag code and a fixed code among a speech code for which it is judged that data is being embedded". Especially, WU describes that "we observe that only the LSP coefficients and the lag of pitch predictors are stable enough among all coefficients of G. 723.1" (see WU at page IV-3306, right column). Such description of WU teaches away from the feature of the extraction unit to extract data in not only a part of a LSP code and a pitch lag code not also a fixed code. Hence, the noted features of claim 3, namely the extraction judgment unit and the extraction unit having the above mentioned limitations, are a distinction over WU.

Among other things, a *prima facie* case of obviousness must establish that the asserted combination of references teaches or suggests each and every element of the claimed invention. In view of the distinction of claim 3 noted above, at least one claimed element is not present in the asserted combination of references. Claim 5 has the same features of claim 3. Hence, the Office Action fails to establish a *prima facie* case of obviousness vis-à-vis claims 3 and 5. Claim 4 ultimately depend from claim 3, respectively, and so at least similarly distinguish over the asserted combination of references.

### **INDEPENDENT CLAIMS 6 and 10**

As an example, independent claim 6 recites (among other things) features of "judging whether or not a speech code is capable of embedding data based on a liner spectrum pair (LSP) code, a pitch lag code, a fixed code and a gain code included in a past speech code output from a code excited linear prediction (CELP) encoder" and "embedding data to be embedded in a part of a LSP code, a pitch lag code and a fixed code among a speech code for which it is judged that a speech code is capable of embedding data". As will be explained below, at least these features of claim 6 is a distinction over each of GOPALAN and WU, and thus over their combination.

Regarding GOPALAN, GOPALAN does not disclose a CELP encoder to output a speech code including a liner spectrum pair (LSP) code, a pitch lag code, a fixed code and a gain code, as stated in the Office Action (see Office Action at page 5). Hence, GOPALAN fails to teach or suggest "the judging whether or not a speech code is capable of embedding data based on a LSP code, a pitch lag code, a fixed code and a gain code included in a past speech code output from a CELP encoder". GOPALAN also fails to teach or suggest "the embedding data to be embedded in a part of a LSP code, a pitch lag code and a fixed code among a speech code for which it is judged that a speech code is capable of embedding data". Hence, the noted features of claim 6, namely the judging and the embedding having the above mentioned limitations, are a distinction over GOPALAN.

Regarding WU, WU fails to teach or suggest that “the judging whether or not a speech code is capable of embedding data based on a LSP code, a pitch lag code, a fixed code and a gain code included in a past speech code output from a CELP encoder”. WU also fails to teach or suggest “the embedding data to be embedded in a part of a LSP code, a pitch lag code and a fixed code among a speech code for which it is judged that a speech code is capable of embedding data”. Especially, WU describes that “we observe that only the LSP coefficients and the lag of pitch predictors are stable enough among all coefficients of G. 723.1” (see WU at page IV-3306, right column). Such description of WU teaches away from the feature of the embedding to embed data into not only a part of a LSP code and a pitch lag code not also a fixed code. Hence, the noted features of claim 6, namely the judging and the embedding having the above mentioned limitations, are a distinction over WU.

Among other things, a *prima facie* case of obviousness must establish that the asserted combination of references teaches or suggests each and every element of the claimed invention. In view of the distinction of claim 6 noted above, at least one claimed element is not present in the asserted combination of references. Claim 10 has the same features of claim 6. Hence, the Office Action fails to establish a *prima facie* case of obviousness vis-à-vis claims 6 and 10. Claim 7 ultimately depend from claim 6, respectively, and so at least similarly distinguish over the asserted combination of references.

#### **INDEPENDENT CLAIMS 8 and 10**

As an example, independent claim 8 recites (among other things) features of “judging whether or not data is being embedded in a speech code based on a liner

spectrum pair (LSP) code, a pitch lag code, a fixed code and a gain code included in a past speech code output from a code excited linear prediction (CELP) encoder” and “extracting data being embedded in a part of a LSP code, a pitch lag code and a fixed code among a speech code for which it is judged that data is being embedded”. As will be explained below, at least these features of claim 1 is a distinction over each of GOPALAN and WU, and thus over their combination.

Regarding GOPALAN, GOPALAN does not disclose a CELP encoder to output a speech code including a liner spectrum pair (LSP) code, a pitch lag code, a fixed code and a gain code, as stated in the Office Action (see Office Action at page 5). Hence, GOPALAN fails to teach or suggest “judging whether or not data is being embedded in a speech code based on a LSP code, a pitch lag code, a fixed code and a gain code included in a past speech code output from a CELP encoder”. GOPALAN also fails to teach or suggest “extracting data being embedded in a part of a LSP code, a pitch lag code and a fixed code among a speech code for which it is judged that data is being embedded”. Hence, the noted features of claim 8, namely the judging and the extracting having the above mentioned limitations, are a distinction over GOPALAN.

Regarding WU, WU fails to teach or suggest that “the judging whether or not data is being embedded in a speech code based on a LSP code, a pitch lag code, a fixed code and a gain code included in a past speech code output from a CELP encoder”. WU also fails to teach or suggest “the extracting data being embedded in a part of a LSP code, a pitch lag code and a fixed code among a speech code for which it is judged that data is being embedded”. Especially, WU describes that “we



observe that only the LSP coefficients and the lag of pitch predictors are stable enough among all coefficients of G. 723.1" (see WU at page IV-3306, right column). Such description of WU teaches away from the feature of the extracting data in not only a part of a LSP code and a pitch lag code not also a fixed code. Hence, the noted features of claim 8, namely the extraction judgment unit and the extraction unit having the above mentioned limitations, are a distinction over WU.

Among other things, a *prima facie* case of obviousness must establish that the asserted combination of references teaches or suggests each and every element of the claimed invention. In view of the distinction of claim 8 noted above, at least one claimed element is not present in the asserted combination of references. Claim 10 has the same features of claim 8. Hence, the Office Action fails to establish a *prima facie* case of obviousness vis-à-vis claims 8 and 10. Claim 9 ultimately depend from claim 8, respectively, and so at least similarly distinguish over the asserted combination of references.

In view of the foregoing discussion, the rejection of claims 1-10 is improper. Accordingly, withdrawal of the rejection is respectfully requested.

### **Conclusion**

In light of the foregoing, withdrawal of the rejections of record and allowance of this application are earnestly solicited.

Should the Examiner believe that a telephone conference with the undersigned would assist in resolving any issues pertaining to the allowability of the

above-identified application, please contact the undersigned at the telephone number listed below.

Any fee due with this paper may be charged to Deposit Account No. 50-1290.

Favorable reconsideration is earnestly solicited.

Respectfully submitted,

/Pedro C. Fernandez/

Pedro C. Fernandez

Reg. No. 41,741

CUSTOMER NUMBER 026304

Telephone: (212) 940-6311

Fax: (212) 940-8986

Docket No.: FUJY 21.045 (100794-00576)

PCF:fd